

## REMARKS

The Non-Final Office Action mailed May 7, 2008, considered and rejected claims 1-26. Claim 5 was objected to because of informalities. Claims 1, 2, 9, 11 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatano et al., U.S. Publ. No. 2005/0226467 (filed Mar. 5, 2004) (hereinafter Hatano), in view of Thieme et al., U.S. Publ. 2006/0056662 (filed Aug. 20, 2003) (hereinafter Thieme), further in view of Biswas U.S. Patent No. 7,120,280 (filed Sep. 27, 2002) (hereinafter Biswas). Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatano in view of Thieme and further in view of Siegel et al., U.S. Publ. No. 2006/0034492 (filed Oct. 30, 2002) (hereinafter Siegel). Claims 4-8 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatano in view of Thieme and further in view of Biswas. Claims 12-19 and 21-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Siegel in view of Biswas.<sup>1</sup>

By this response, claim 5 is amended and claims 22-26 are cancelled.<sup>2</sup> Claims 1-21 remain pending. Claims 1, 11, and 12 are independent claims which remain at issue. The amendment to claim 5 corrects an inadvertent typographical error (noted by the Office in the Office Action).

Claim 1 was rejected under 35 U.S.C. § 103(a) in view of Hatano, in view of Thieme, and in view of Biswas.<sup>3</sup> The Applicant respectfully submits, however, that the Office has failed to satisfy the basic requirements of a *prima facie* case of obviousness under 35 U.S.C. § 103. To establish a *prima facie* case of obviousness, there must be a "clear articulation of the reason(s) why the claimed invention would have been obvious," "the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit," and "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."<sup>4</sup>

Applicant respectfully submits that the Office has failed to clearly articulate the reasons why claim 1 should be considered obvious in view of the cited art and has failed to make explicit the analysis supporting the rejection. Initially, the Applicant would like to point out that the

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<sup>1</sup> Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

<sup>2</sup> The amendments and remarks presented herein are consistent with the information presented by telephone by patent attorney Colby Nuttall (reg. no. 58,146) and attorney Thomas Bonacci.

<sup>3</sup> Office Communication p. 2 (paper no. 20080501, May 7, 2008).

<sup>4</sup> MPEP § 2143; see also *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (2007).

Office has not asserted that all the elements of claim 1 are taught or suggested by the prior art, either separately or in combination. As the invention is defined by the limitations as recited in the claim, a clear articulation of the reasons why the invention is obvious and an explicit analysis supporting the rejection must certainly contain a discussion of how each of the limitations recited in the claim is taught or suggested by the cited art.

In the rejection of claim 1, the Office asserted only that:

"Regarding claim 1, Hatano discloses a method for detecting a pattern object . . . comprising detecting a physical property of the object . . . , computing sum of the set of template data values . . . , calculating a difference score between the stored data values and the input data values . . . and determining whether the difference score is within a match threshold . . . .

Hatano does not specifically disclose creating template of the patterned object. However, Thieme discloses such in his invention . . . . Thieme also discloses acquiring input data values from the interactive display surface, each of the input values corresponding to a different one of the plurality of surface coordinate locations of the interactive display surface, each input value representing a magnitude of the physical property detected at a different one of said plurality of surface coordinate locations . . . .

. . . Biswas discloses . . . a method that allows placing an image on the display surface in any arbitrary orientation without affecting the template matching capability of the device . . . . Biswas further discloses quadrilateral shape of templates . . . ."<sup>5</sup>

Initially, the Applicant point out that the elements and limitations asserted by the Office as disclosed by the cited art are not the complete list of elements and limitations as recited by the claim. Additionally, some elements asserted by the Office as being disclosed by the cited art are not elements or limitations which are recited anywhere in the claim. In particular, the Office asserts that the cited art discloses, but the claim does not recite, "calculating a difference score between the stored data values and the input data values."<sup>6</sup>

Further, the Office has not asserted that many elements and limitations which are recited in the claim are either taught or suggested by the cited art. The Office has not asserted that the cited art teaches or suggests "creating a template of the patterned object *at a known orientation*." The Office has also not asserted that the cited art teaches or suggests the "template comprising a quadrilateral template bounding region having a side aligned with one of the two orthogonal axes and a set of template data values associated with the quadrilateral template bounding region."

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<sup>5</sup> Office Comm. pp. 2-3.

<sup>6</sup> Office Comm. p. 2.

The Office has also not asserted that the cited art teaches or suggests "each template data value representing a magnitude of the physical property at a different one of a plurality of surface coordinate locations within a bounding area encompassing the patterned object."

The Office has also not asserted that the cited art teaches or suggests "calculating a difference score between the template data values and the input data values *encompassed by the quadrilateral template bounding region*." The Office has also not asserted that the cited art teaches or suggests "determining that the patterned object is on or adjacent to the interactive display surface."

The Applicant also respectfully submits that certain elements asserted to be disclosed by the cited art are, in fact, not disclosed as asserted. For instance, the Office asserted that " Thieme . . . discloses acquiring input data values from the interactive display surface, each of the input values corresponding to a different one of the plurality of surface coordinate locations of the interactive display surface, each input value representing a magnitude of the physical property detected at a different one of said plurality of surface coordinate locations . . . (See p. 3, [0043]-[0044])."<sup>7</sup> The portion of Thieme cited by the Office for such teaching reads:

"[0043] Referring to FIG. 2, in order to address the need in the marketplace for interoperability across devices, a method is presented through which a reference profile is used to generate system-specific identifiable images, which allow for automated creation of system-specific templates. This process improves on the traditional biometric acquisition method 101 by processing the enhanced image 201 through a system-specific reference profile 202, which encapsulates key characteristics of the enhanced image such as dimension, resolution, grayscale, shape, and orientation. The reference profile generates 203 a second identifiable image 204 from which system-specific templates can be generated for enrollment, matching, and storage in biometric systems.

[0044] Referring to FIG. 3, data contained in the reference profile 302 is used to enable an image quality processor 303 and an image cropping component 304. These work in conjunction 301 to produce system-specific images 305."<sup>8</sup>

The Applicants submit that the cited portion of Thieme (as well as its entirety) fails to teach or suggest "each of the input values corresponding to a different one of the plurality of surface coordinate locations of the interactive display surface." Further, the cited portion of Thieme (as well as its entirety) fails to teach or suggest "each input value representing a magnitude of the physical property detected at a different one of said plurality of surface coordinate locations."

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<sup>7</sup> Office Comm. p. 3.

<sup>8</sup> Thieme ¶¶ 0043–44.

Additionally, the Office asserted "Therefore, it would have been obvious . . . to incorporate the features of Thieme's invention into the system and method of Thieme in order to design a system that maintains its database."<sup>9</sup> As maintaining a database is neither a recited element of the claim nor a goal of the invention, the Applicant submits that maintaining a database fails to provide motivation to combine the asserted disclosure of Thieme with the asserted disclosures of Hatano and Biswas.

In view of the above discussion, the Applicant submits that the rejection of claim 1 fails to assert that all the elements are taught, suggested, or made obvious by the cited art. Further, the Applicant submits that certain assertions as to the teachings of the prior art – as they do not recite elements of the claim – fail to clearly articulate the reasons supporting the rejection. Finally, the Applicant submits that certain assertions as to the teachings of the cited art are in error – as in the case of Thieme noted above.

Because of at least the reasons noted above, the Applicant respectfully submits that a prima facie case of obviousness under 35 U.S.C. § 103 has not been established and therefore the rejection of claim 1 should be withdrawn. The Applicant respectfully requests full and favorable reconsideration of claim 1 as presented. Further, as a prima facie case of obviousness has not been established and any new search or rejection is not necessitated by amendment to the claims, the Applicants further respectfully submit that any further Office Action, should it be necessary, should be a non-final action.

As independent claim 11 recites a memory medium encoded with machine instructions for carrying out the steps of claim 1 (i.e., a computer program product), the Applicant submits that the preceding discussion applies equally to claim 11. Correspondingly, the rejection of claim 11 should be withdrawn and the Applicant respectfully requests full and favorable reconsideration of claim 11.

Independent claim 12 was rejected under 35 U.S.C. § 103 as being unpatentable in view of Siegel and in view of Biswas.<sup>10</sup> The Applicant submits that the Office has not presented a prima facie case of obviousness under 35 U.S.C. § 103 and therefore the rejection should be withdrawn.

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<sup>9</sup> Office Comm. p. 3.

<sup>10</sup> Office Comm. pp. 5–6.

In particular, the discussion of claim 12 did not assert that the cited art teaches or suggests a memory in communication with the processor, the memory storing data and machine instructions that cause the processor to carry out a plurality of functions. The Office did not assert that the cited art teaches or suggests detecting an intensity of the infrared light reflected back from the patterned object with the light sensor. The Office did not assert that the cited art teaches or suggests creating a template of the patterned object *at a known orientation*.

The Office did not assert that the cited art teaches or suggests the template comprising a quadrilateral template bounding region having a side aligned with one of the two orthogonal axes and a set of template data values associated with the quadrilateral template bounding region. The Office did not assert that the cited art teaches or suggests each template data value representing an intensity of reflected infrared light *at a different location within a bounding area encompassing the patterned object*. The Office did not assert that the cited art teaches or suggests determining that the patterned object is adjacent to the interactive surface.

As the elements and limitations of the claim define the present invention and as each element and limitation of the claim has not been asserted to be taught or made obvious by the cited art, the Applicant submits that the reasons for the claim being obvious have not been clearly articulated and the reasons have not been explicitly provided. Accordingly the Applicants submit that a rejection under 35 U.S.C. § 103 is improper and should be withdrawn. Correspondingly, the Applicant respectfully requests full and favorable reconsideration of claim 12.

In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

Dated this 7<sup>th</sup> day of November, 2008.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rick D. Nydegger", with a stylized flourish at the end.

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